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VGEN.P-056  
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Darasch et al.  
Serial No.: 09/536,111  
Filed: March 24, 2000  
For: Method for Alignment of DNA Sequences with Increased Read-Length and Accuracy

Examiner: M. Zeman

#6  
Plunkett  
6/10/01

RESPONSE TO RESTRICTION REQUIREMENT

Asst. Commissioner for Patents

Washington, D.C. 20231

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Sir:

Responsive to the restriction requirement mailed May 17, 2001 for the above-captioned application, Applicants hereby elect Group I, claims 1-20, **with traverse**.

The Examiner states that the inventions are different in this case because the invention could be practiced manually, and that a programmed computer (the subject of claims 21 and 22) is therefore not required. In assessing whether a restriction requirement is proper, however, the Examiner should not apply rigid formulas, but should instead look to see if the inventions are actually distinct, and even if the inventions are distinct whether the search and consideration of the two inventions would entail substantial additional burden. Indeed, § 803 of the MPEP states that:

If the search and examination of an entire application can be carried out without serious burden, the examiner **must** examine it on the merits, even though it includes claims to independent inventions.

(emphasis added).

I hereby certify that this paper is being deposited with the US Postal Service as first-class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on May 29, 2001.

Marina T. Larson  
Marina T. Larson, PTO Reg. No. 32,038

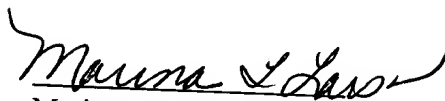
May 29, 2001  
Date of Signature

The argument in support of the restriction requirement made in this case rests on two factors, the assertion that the process of the invention can be performed by hand, and the assertion that the separate inventions are classified differently. Applicants suppose that if one had essentially unlimited time and a great deal of patience, one could in theory perform the method of claims 1-20 by hand, particularly if only a limited number of bases are being considered. As a practical matter, however, the procedures set forth in method claims 1-20 are unlikely ever to be performed without the assistance of a computer. Thus, it seems likely that any relevant references will relate to methods which employ computers. Thus, there is likely to be a substantial overlap regardless of which invention were considered. Thus, Applicants submit that the inventions do not have separate status in the art, nor are they recognized as "divergent subject matter." Further, because of this likely overlap in any references, Applicants submit that there would not be a serious burden on the Examiner if all claims were considered in the same application.

With respect to the classification, Applicants respectfully submitted that the Examiner has mis-classified claims 21 and 22. When one looks at recent patents which discuss base-calling, they are classified in Class 435, and frequently subclass 6, whether the claims are directed to methods or apparatus. See, for example, US Patents Nos. 6,235,479, 6,223,128 and 5,916,747. On the other hand, a search of PTO records using the search engine on the USPTO web site for patents which include the words "DNA" or "nucleic" anywhere in the specification, and which are classified in Class 345, subclass 501 revealed that from 1996 to 2001, returned as a response that there are no such patents. Thus, Applicants submit that the search requirements for the two groups of claims are in fact the same, and that no additional burden would be

imposed on the Examiner to consider all claims together. Withdrawal of the restriction requirement is therefore requested.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Marina T. Larson".

Marina T. Larson, Ph.D.

PTO Reg. No. 32,038

Attorney for Applicant

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